

REMARKS

Applicants respectfully requests reconsideration of the subject application as amended herein. This Amendment is submitted in response to the Office Action mailed December 18, 2007. Claims 1, 2, 4-22, 37-40, 42-47, 49-60, 99-102 and 105-123 are pending. In this Amendment, claims 1, 2, 6, 8, 37, 60, and 111 are amended. Claim 48 is cancelled. Claims 115-123 are new. Support for claims 115-117 is found throughout the specification and Figures 4, 12A, and 12B. Support for claims 118-123 is at least found in paragraph [060], page 21 and paragraph [063], page 23. No new matter is added by the amended claims.

Rejections under 35 U.S.C. § 103

Claims 1, 2, 5-8, 22, 37, 38, 40, 56, 58-60, 105, 106 and 111-114 are rejected under 35 U.S.C. 103(a) as being unpatentable over Akita (WO 2001-62517) in view of Swindlehurst et al. (U.S. Patent Publication No. 2006/0210769, hereinafter "Swindlehurst").

Independent claims 1, 37 and 111

Independent claim 1 requires:

I. An apparatus comprising:

a strap including a first substrate with an embedded integrated circuit, the integrated circuit having a conductive pad, the integrated circuit being embedded in an opening provided in the first substrate;

a thin-film planarization dielectric layer having a thickness less than 10 microns and being patterned with at least two vias, the thin-film planarization dielectric layer formed directly over a portion of the integrated circuit and a portion of the first substrate; and

a conductive medium, covering at least a portion of the integrated circuit and a portion of the first substrate extending beyond edges of the integrated circuit, formed directly over the thin-film dielectric layer and attached to the

conductive pad through at least one of the vias, the conductive medium having a greater surface area than the conductive pad and is a conductive paste containing silver and wherein the conductive medium fills the at least two vias and wherein the conductive medium contacts the conductive pad through the at least one of the vias; and

a large-scale component attached to the conductive medium, the large scale component electrically coupled to the integrated circuit through the at least one of the vias, the large scale component including a second substrate, and the second substrate being larger than the first substrate, wherein the large-scale component includes an antenna having two arms, each arm of the antenna being coupled to the integrated circuit through a respective via of the at least two vias. (Emphasis added).

As amended, claims 37 and 111 now require similar limitations as noted in the representative claim 1. Specifically, the large-scale component includes an antenna having two arms as shown at least in Figure 4, and described in paragraph [051], page 17 of the specification.

Furthermore, each arm of the antenna is being coupled to the integrated circuit through a respective via of the at least two vias as described throughout the specification, for example, as shown in Figures 12A and 12B.

Akita states in column 7, lines 26-30:

“In this manner, for instance, the antenna 6 of .25 mm in wiring width, 0.5 mm in pitch thereof, 6 turns in number of turns, and 75 mm X45 mm in outermost periphery can be formed...” (Emphasis added).

The antenna of Akita is formed into a plurality of turns as further described in column 1, lines 51-53. The antenna of Akita is a single line width antenna that completes six turns or revolutions as it is formed on an antenna circuit board as clearly shown in Figures 2 and 17

of Akita.

In contrast to the claims, Akita does not disclose an antenna having two arms where each arm of the antenna is coupled to the integrated circuit through a respective via.

Moreover, claims 1, 37, and 111, require a thin-film planarization dielectric layer having a thickness less than 10 microns. The Examiner agrees that Akita does not show a planarization layer having a thickness less than 10 microns.

The Applicants' specification describes the distinction between a thin-film planarization layer and a thick film layer in paragraphs [041], [057], and [059] of the specification. The thin-film planarization layer serves a critical purpose of allowing easy removal for the patterning of vias as described on page 21, paragraph [059].

The Examiner contends that routine experimentation is not inventive, citing *In re Aller*, 220 F.2d 454, 456 105 USPQ 233, 235 (CCPA 1955). However, *In re Aller* involved a specific fact scenario involving different processes performed at a specific temperature range in a specific acid concentration (*See* MPEP 2144.05, II.,A.). Thus, *In re Aller* is clearly distinguishable on the facts and is unrelated to a thin-film planarization layer having a thickness less than 10 microns and serving the critical purpose of allowing easy removal for the patterning of vias.

Furthermore, the Examiner relies upon paragraph [0086] in Swindlehurst to show a thin-film planarization layer. However, paragraph [0086] in Swindlehurst only describes a planarization layer in the range of 10 to 20 μm thick. In other words, Swindlehurst does not show a thin-film planarization layer being less than 10 microns thick.

Therefore, Akita and Swindlehurst do not disclose each and every limitation required by the claims.

For at least the reasons explained above, Applicants respectfully submit that Akita

fails to disclose all the elements as claimed and respectfully request the withdrawal of the claim rejections.

Dependent claims 2, 5-8, 22, 38, 40, 56, 58-60, 105, 106, 112-123

Claims 2, 5-8, 22, 38, 40, 56, 58-60, 105, 106, and 112-123 depend from independent claims 1, 37 and 111 and should be found allowable for the reasons above.

With respect to claim 106, the Examiner again contends that routine experimentation is not inventive, citing *In re Aller*, 220 F.2d 454, 456 105 USPQ 233, 235 (CCPA 1955). However, as already mentioned, *In re Aller* involved a specific fact scenario involving different processes performed at a specific temperature range in a specific acid concentration. Again, *In re Aller* is clearly distinguishable on the facts and is unrelated to a conductive medium having a thickness of one micron or less as required by claim 106.

Claims 9 and 57 are rejected under 35 U.S.C. §103(a) as being unpatentable over Akita (WO 2001-62517) in view of Swindlehurst et al. (U.S. Patent Publication No. 2006/0210769).

Claims 9 and 57 depend from independent claim 1 and 37. As described above, Akita in view of Swindlehurst fails to disclose each and every element of independent claims 1 and 37 as amended.

For at least the above reasons, Applicants respectfully submit that claims 9 and 57 are patentable in view of Akita in view of Swindlehurst and respectfully request the withdrawal of the claim rejections.

Claim 107 is rejected under 35 U.S.C. §103(a) as being unpatentable over Akita (WO 2001-62517) in view of Swindlehurst et al. (U.S. Patent Publication No. 2006/0210769) in

further view of Fjelstad (U.S. Pat. No. 6, 211,572).

Claim 107 depends from independent claim 1. As described above, Akita and Swindlehurst fail to disclose each and every element of independent claims 1, 37, and 111 as amended. Fjelstad fails to teach or suggest the a thin-film planarization layer comprising silicon dioxide and having a thickness less than 10 microns being formed directly over a portion of an integrated circuit and a portion of a first substrate as required by the claims. At best, Fjelstad only shows a passivation layer on the surface of a chip but not a passivation layer formed directly over a portion of an integrated circuit and a portion of a first substrate.

For at least the above reasons, Applicants submit that claim 107 is patentable over Akita in view of Swindlehurst in view of Fjelstad and respectfully request the withdrawal of the claim rejection.

Applicants respectfully submit that in view of the amendments and arguments set forth herein, the rejections herein have been overcome. Accordingly, it is believed that all pending claims define the subject invention over the prior art of record and are in condition for allowance. If the Examiner determines the prompt allowance of these claims could be facilitated by a telephone conference, the Examiner is invited to contact the undersigned at (408) 720-8300.


Deposit Account Authorization

Authorization is hereby given to charge our Deposit Account No. 02-2666 for any charges that may be due.

Respectfully submitted,

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